

REMARKS

Claims 1-6 have been amended, claims 7-8 have been canceled, and claims 9-17 are newly added. Claims 1-6 and 9-17 are currently pending in the application.

Amended claims 1, 3 and 4, and new claims 9, 11 and 13, more distinctly claim the invention as described of a microfluidic device comprised of a first plate and a second plate, where each plate is comprised of an organized array of fluidic handling elements; sample receiving elements, and microfluidic units, respectively. Furthermore, fluids introduced into the first plate are capable of being transferred to the second plate, with there being a unique correspondance between the fluid handling elements in each plate.

Amended (or new) claims 2, 5, 6, 10, 12, and 14-17 include more limitations in a dependent claim format. Basis for the claim amendments are provided in the table below:

Claim	Term/Phrase	Basis
1-12	A [The] microfluidic device	page 2, line 28; page 3, line 7
1, 4	a first plate	page 3, line 8
1, 4	an array of sample receiving elements	page 3, line 10
1, 4	a second plate	page 3, line 8
1, 4	an array of microfluidic units	page 3, line 9; page 8, lines 17-25
1	plurality of reservoirs	original Claim 4; page 5, line 10
1, 4	main flowpath	page 11, line 12
1, 4	reservoir positioned for fluid communication with one sample receiving element of the first plate	page 10, line 31 – page 11, line 9
3	array of elements...has the spacing format	page 10, lines 24-27
4	the number of microfluidic units is a multiple of 8	original Claim 2
5	second plate is plastic	page 18, lines 24-26; page 19, lines 13-17
9, 11, 14	first plate is integral with the second plate	page 3, line 12
10	said array is comprised of rows of 8 units	original Claim 2
12	first plate, second plate and film are plastic	page 18, lines 24-26; page 19, lines 13-17
13	contacting the sample receiving element array with a plurality of samples	page 4, lines 1-5
13	transferring the samples from the receiving elements into the microfluidic units	page 10, lines 17-20
13	operating on the samples	page 3, lines 13-16
15	capillary action	page 9, line 2, line 10; page 9, line 24 ("wicking action")
16	separation of each sample into individual	page 22, line 22.

	components	
17	transferred simultaneously...transferred simultaneously...operated upon simultaneously	page 3, lines 20-22; page 4, line 1; page 5, lines 1-9.

No other amendments have been made, and no new matter has been added by the amendments. Reconsideration of the application is respectfully requested.

Rejections Under 35 U.S.C. 112

The Examiner rejected claims 1-7 under 35 U.S.C. 112, second paragraph, as being indefinite. Applicants respectfully disagree with this rejection, particularly in view of the claim amendments.

The Examiner states that in claims 1, 3 and 4 the subject elements of the claim were unclear, in claim 2 there was lack of antecedent basis for "...rows of units", and claim 4 was also indefinite with respect to correspondance between elements. All the above have been rectified by amendment. The claimed elements and their limitations are more clearly recited in claims 1 and 4. The matter of "...rows of units" is properly claimed in claim 10. Claim 7 was rejected for failing to recite a structural relationship between elements; this claim has been canceled. Claim 8, rejected for indefiniteness, as well as under 35 U.S.C. 101 for not being a proper process claim, has also been canceled.

In view of the above, Applicants respectfully request that this rejection be withdrawn.

Rejections Under 35 U.S.C. 103

The Examiner rejected claims 1-3 and 8 under 35 U.S.C. 103(a), as being unpatentable over Regnier et al in view of Sundberg et al. The Examiner states that Regnier teaches a microchip with a plurality of devices (e.g. multiple parallel channels), and that Sundberg discloses a device for loading samples onto microfluidic apparatus that includes a plurality of pins, wherein the pins may be aligned in an array corresponding to a standard microtiter plate. Applicants assert that the disclosure by Sundberg essentially replicates the capabilities of multichannel pipettes, as may be inferred readily by comparing claims 8 and 9 of Sundberg. Further, the pins used by Sundberg are separate from and extrinsic to the novel fluidic microstructures in the devices taught in the disclosure. In contrast, the subject invention employs as intrinsic to the device a first plate that essentially transfers liquid samples from a sample source plate to each microfluidic network unit for analysis and/or processing (cf. Figure 3). Several factors present in the subject invention, such

as the tight integration of the function of the first plate to that of the entire apparatus, the unique correspondance of array components on each plate with one another, and the required fluid communication between the fluidic components on each plate, render the subject invention patentably distinct over Regnier in view of Sundberg. Accordingly, Applicants request that this rejection be withdrawn.

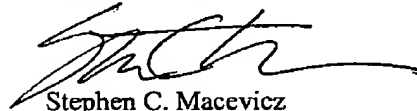
The Examiner also rejected claims 4-7 under 35 U.S.C. 103(a), as being unpatentable over Regnier et al., in view of Sundberg et al., further in view of Soane et al. In addition to the argument as presented above, the Examiner states that Soane teaches the equivalence of a cover plate and cover film, thus further extending the disclosure by Regnier.

Applicants respectfully disagree with this rejection. The teaching of Soane does not supply any feature that when combined with Regnier and Sundberg would put Applicants' invention in the hands of one with ordinary skill in the art any more than would Regnier and Sundberg alone, as pointed out above. Applicants submit that the teaching of Soane is essentially duplicative of that of Regnier. Accordingly, Applicants request that the rejection be withdraw.

The Examiner further notes that with respect to claim 5, Regnier teaches the use of polymeric materials such as polystyrene. Applicants respectfully disagree that this renders claim 5 unpatentable since, as set forth above, neither Regnier nor Sundberg either separately or together suggest or disclose Applicants' invention.

For the above reasons, Applicants submit that any basis for rejection of the pending claims has been overcome and respectfully request that it be withdrawn, and that the claims be allowed and the application quickly passed to issue.

Respectfully submitted,



Stephen C. Macevicz
Reg. No. 30,285
Attorney for Applicants

Attachments:
Petition for Time Extension
Fee Transmittal

Telephone: (650) 210-1223
Email: smacevicz@aclara.com